AIR – CONDITIONING DOOR
VSE-PC1-VSE-PC2

ASSEMBLING MANUAL

&

USER MANUAL

Please read the information given in this manual carefully before assembling and commissioning your air – conditioning door.
It tells you know to use and maintain the air – conditioning door safely.

Manufacturer : MULLER VINOSAFE SAS
2 Rue des Artisans – B.P. 5
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Tel : + 33 (0) 3.89.71.45.35
Fax : + 33 (0).3.89.71.49.73
e-mail : info@vinosafe.com

SAFETY INSTRUCTIONS

- Use this appliance only for the purpose for which it is intended:
  - storing your wine at a temperature between 8° and 15°C.
  This appliance must not be used for any other purpose as this may be dangerous. The manufacturer may not responsible if the appliance is not used properly.

- An appliance that has been damaged (impact, flooding, fire, surges caused by lightning, etc…) may be hazardous. If the appliance has suffered damage, unplug the appliance immediately or disconnect the mains supply and contact the manufacturer (see rating plate on the appliance).

- This appliance complies with current safety regulations. Maintenance work (such as electric connections) must only be carried out by qualified engineers. Faulty connections or repairs that have not been carried out correctly present a considerable danger for the user.

- Make sure that the voltage on your mains supply corresponds to the rating shown on the rating plate.

- This appliance may not be electrically safe if it is not connected to an effective earth lead. It is essential that this basic safety measure is taken and, if there is any doubt, the domestic wiring installation should be checked by a qualified electrician. The manufacturer shall not be held responsible for the consequences if the appliance is not earthed or if the earth is faulty or incorrectly connected.

- For safety reasons do not use an extension lead.

- Disconnect the appliance from the mains supply while undertaking maintenance work or cleaning (unplug the appliance or open the circuit breaker).

- Do not allow young children to play with this appliance or to use it. Do not leave the keys within their reach. They could lock themselves inside.

- Do not lean on the door when it is open.

- If liquid accidentally runs into the air conditioning unit, (broken wine bottles, etc…), unplug the appliance immediately or disconnect the mains supply and contact the manufacturer (see rating plate on the appliance).

- Make sure that appliances are rendered unusable when they are no longer in use. Unplug the appliance and cut the cable. Then take the appliance to an approved refuse tip.

- Keep the manuals with your appliance for future reference.

IDENTIFICATION

The following identification plate should be placed just behind the top grill of the air conditioning unit.

VINOSAFE PAUL MULLER S.A. 2 rue des Artisans F 68280 SUNDHOFFEN	CE		
Type :		N° de serie :	
VSB :		Volts :	Hz :
AVR :		Watts :	
ATB :		R134a :	gr
PCVS :		Année :	
CL :			
TVR :			

NB: if you need further information or technical assistance, always state the model, type and serial number which are shown on the identification plate.

SUMMARY

1. Preparation of the "Wine Cellar"

1.1. Measuring the reserve area in the wall before fixing the door support frame

1.2. Insulating work in the wine cellar

1.2.1. Installation of a vapour barrier

1.2.2. Installation of thermal insulation

2. Installation of the air-conditioning door VSE-PC1 or VSE-PC2

2.1. Fixing the support frame to the reserve area of the wall

2.2. Mounting the frame on the support frame

2.3. Mounting the lighting strip on the door frame

2.4. Mounting the door on the door frame

2.5. Mount the air-conditioner on to the door

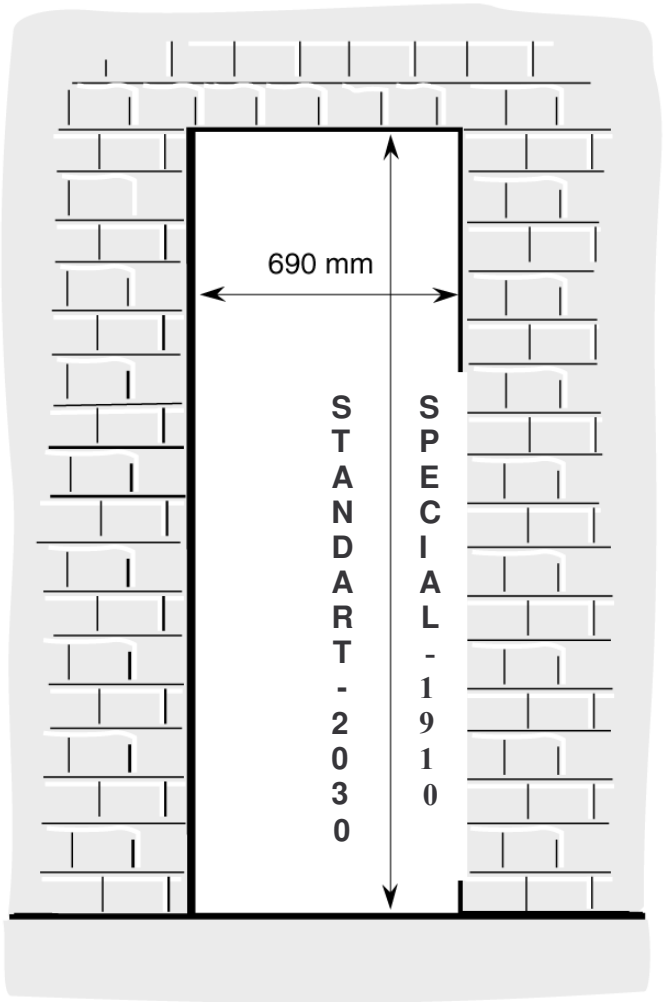
3. Start-up

1. Préparation of the "Wine Cellar "

1.1. Measuring the reserve area in the wall before fixing the door support frame

The support frame, the base for the whole air-conditioner door and door frame, must be completely fitted into the wall of your wine cellar.

For this purpose, it is advisable, if necessary, to build the reserve area respecting the following dimensions as shown opposite :



1.2. Insulating work in the wine cellar

Your room must satisfy precise insulating criteria so that your VINOSAFE air-conditioning door can effectively and durably regulate the ambient air while minimising your electric consumption.

IMPORTANT
The insulating work must be carried out on all the surfaces of the wine cellar (walls, grounds, celling) according to the following procedure

1.21. Installation of a vapour barrier :

The water vapour tends to migrate through the surfaces from outside the cellar (warmer) to inside the cellar (cooler). This excessive addition of humidity causes the seeping of water, producing several harmful results :

❶ Poor storage of labels and corks with risk of mildew

❷ Uninterrupted operation of the air-conditioner reducing the length of its life. In fact, all the air-conditioner's energy is used to dry the cellar and not to cool the air.

❸ Damaging of the thermal insulation.

To avoid this, it is ***essential*** to equip all the interior surfaces of the cellar ***with a vapour barrier*** (walls, celling, ground). ***This vapour barrier must be waterproof and continuous.***

This can be archived :

❶ By covering the wall with a polythene type plastic film.

❷ By covering the surfaces with an aluminium / bitumen compound.

❸ By covering the surfaces with an aluminium / polythene compound.

❹ By applying bitumen to the surfaces.

1.2.2. Installation of thermal insulation

The thermal insulation limits the heating of the cellar providing a better operating rate of the air-conditioning unit.

We remind you that **it is important to insulate all the surfaces of your cellar** (walls, ground and celling) over the vapour barrier.

For the ground, it is preferable to use an extruded polystrene type of compact insulator (Roof mat) or polyurethane foam that can be covered for a more attractive finish with, for example, washed fine gravel over a cement covering.

You can protect the celling and wall insulation using paint or a rough cast coating.

The characteristics of the insulation depend on the volume of your cellar and the type of material chosen and are in relation to the following calculations :

A. <u>Calculation of the total area of the surfaces S</u> :

L = length of the room (in metres)
W = width of the room (in metres)
H = Height of the room (in metres)

$$S \text{ (in m}^2\text{)} = (L + W) \times H \times 2 + L \times W \times 2$$

B. <u>Calculation of the thickness of the insulation</u> :

Assumption : External temperature = 30° C
Internal temperature of the cellar = 10° C

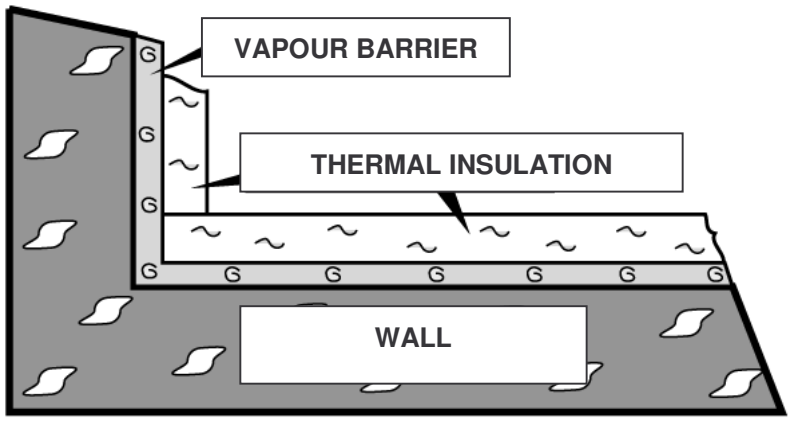
Percentage duty cycle : 75 %
including 15 % in cooling mode
including 60 % in maintenance mode

Choose your insulating material and retain the corresponding insulating coefficient λ :

Insulating material	λ (In kcal/m/° C)
Expanded polystrene	0.038
Extruded polystrene (Roof mat)	0.026
Polyurethane	0.022

<u>Now determine the insulating thickness "T"</u> : required in relation to the chosen material.

For an air conditioning door type PCVS 1	T (mm) = λ x S x 70
For an air conditioning door type PCVS 2	T (mm) = λ x S x 33



GENERAL PRECAUTIONS

The insulation of the cellar (vapour barrier an thermal insulation) must be continuous in order to avoid any passage of harmful heat or humidity through the surfaces.

Avoid thermal bridges by also insulating metallic beams, water columns,etc.,passing through your wine cellar.

C. **<u>Preparing the electric connection</u> :**

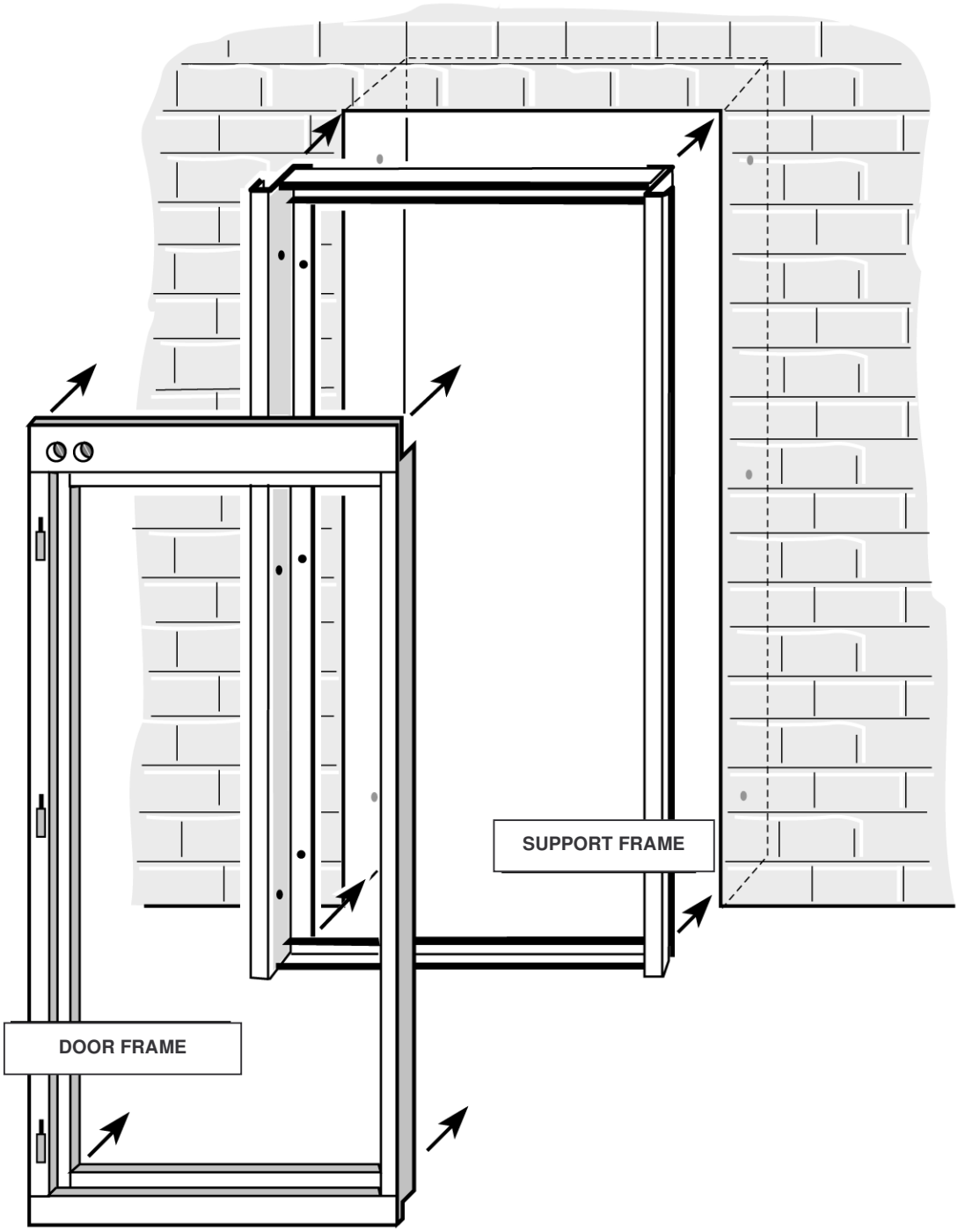
WARNING : Power supply must be switch off

Check on the lighting strip which side the electric connecting block is situated (in relation to the way the door opens).

Install your single-phased electric supply cable + earth (section 3 x 1.5 mm^2) to the connection point of the lighting strip.

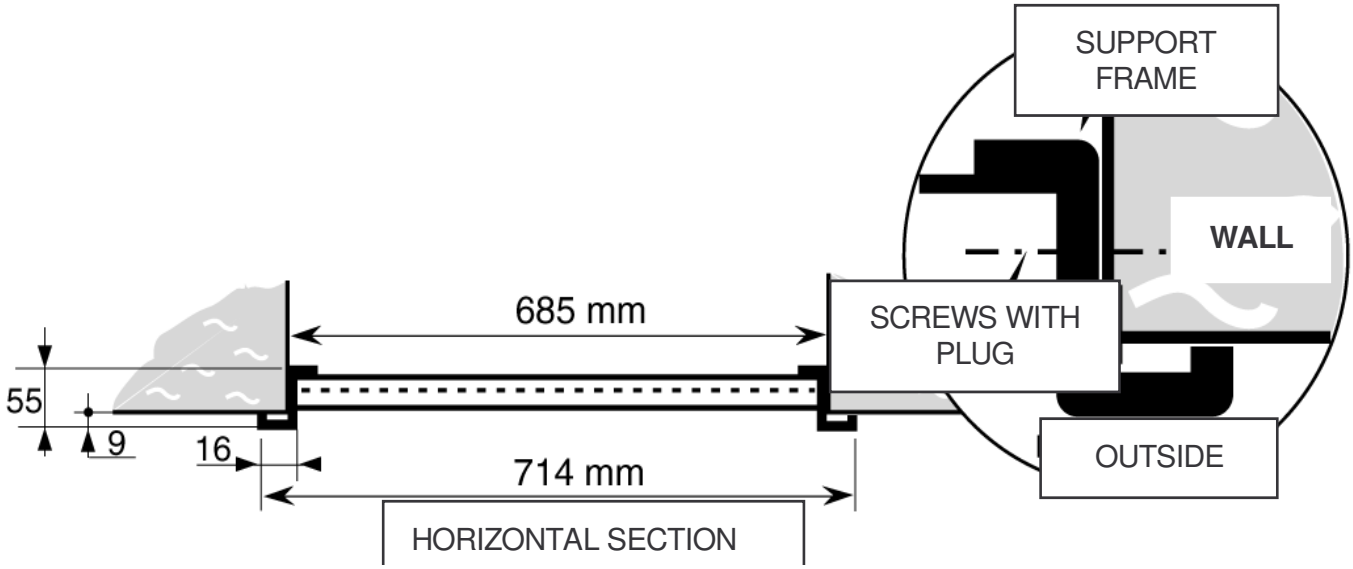
Avoid any accident by momentarily cutting the power supply.

2 . INSTALLATION OF THE AIR CONDIONING DOOR .



2.1. Fixing the support frame to the reserve area of the wall

Place the support frame in the reserve area and mark the place of the mounting screws.
Drill the corresponding holes and drive in the 6 plugs ∅ 8 mm.
Fix on the support frame with 6 screws T.F. 6 x 50.



NOTE

You can place wooden wedges between the support frame and the walls not to deform the support frame columns while the screws are being tightened.

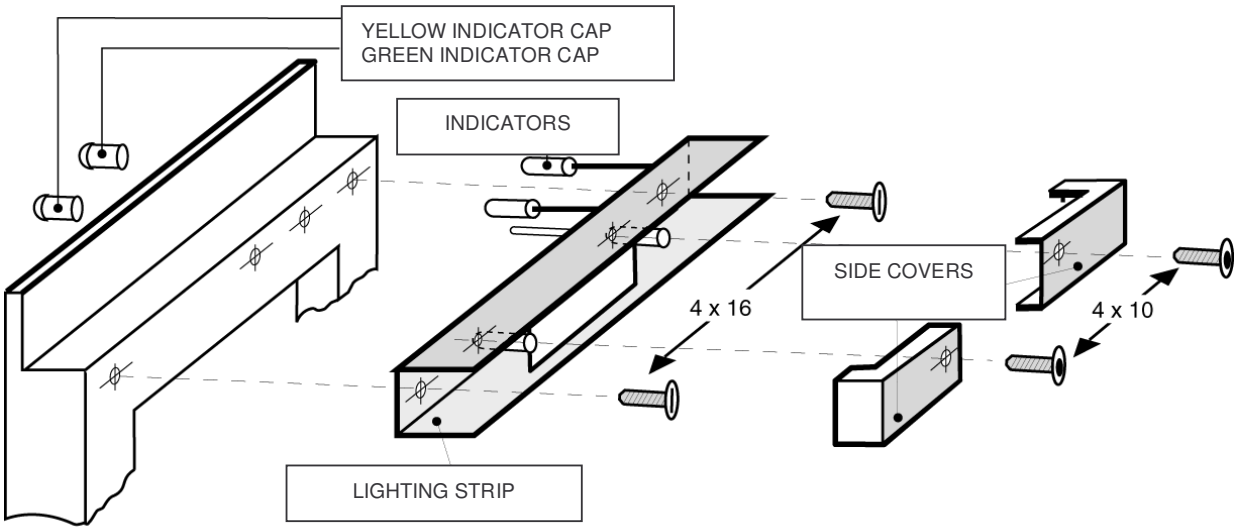
2.2. Mounting the frame on the support frame

Using 6 screws 5 x 25.
Sometimes it is necessary to force the screws slightly to obtain the self-cutting.

2.3. Mounting the lighting strip on the door frame

⇒ WARNING : UNPLUG POWER SUPPLY BEFORE CONNECTING LIGHTING STRIP.

Remove the side covers.



Position the lighting strip on the door frame, making sure to :

* Pass the white switch into the hole provided in the door frame,
* Place the two indicators in the two holes provided in the door frame,

Fix the lighting strip using the two screws (4x16).
Connect the supply cable to the strip block
respecting the colour of the wires :

* Black = Live
* Blue = Neutral
* Green/Yellow = Earth

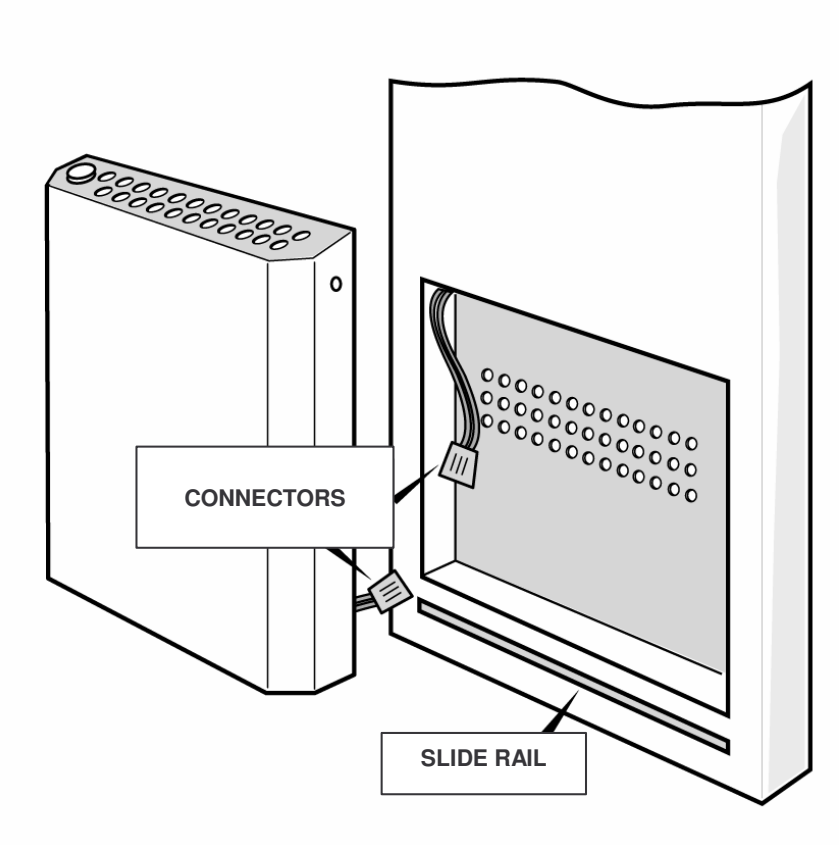
Fix the side covers using the two screws 4x10

2.4. Mounting the door on the door frame

Hook the door into the hinge pins of the door frame.
Slide the black flexible sheath (at the upper angle of the door) in the notch provided on the light strip and fix it into place by screwing the nut.
Mount the two red connectors.

2.5. Mount the air-conditioner on to the door

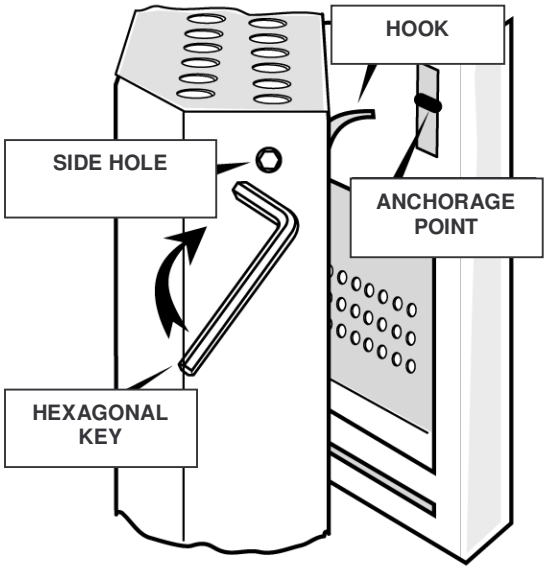
Place the air-conditioner in front of the door.
Mount the two connectors (bottom of the door and air-conditioning unit)
Install the air-conditioning unit on the slide rail.



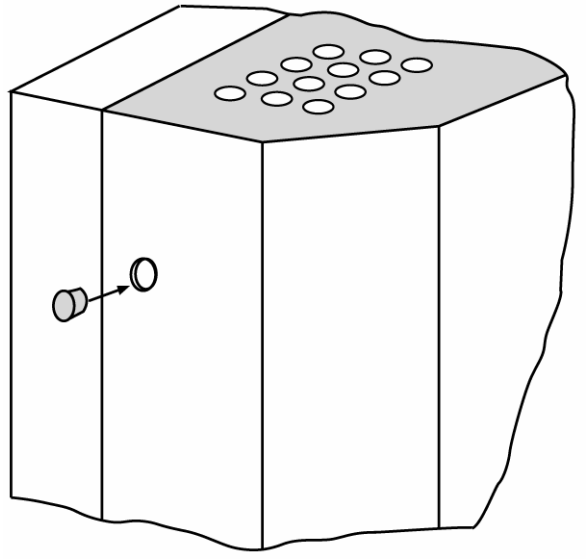
Move the hooks using the hexagonal key in the side holes of the air-conditioning unit so that the hooks slide into the slits provided on the door and provisionally grip the anchorage points without tightening them.

Check that the air-conditioning unit is no rubbing against the door frame. If it is, reposition the air-conditioning unit.

Firmly tighten each hook.



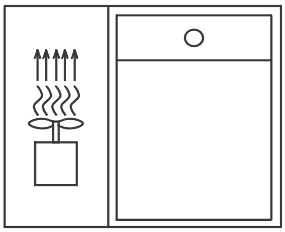
Insert the two plugs which block the handle holes of the hooks.



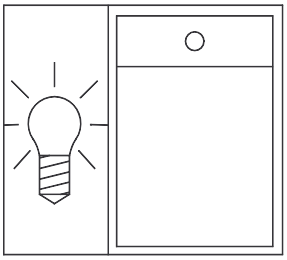
Your VINOSAFE air-conditioning door is installed

USER MANUAL

COMMISSIONING

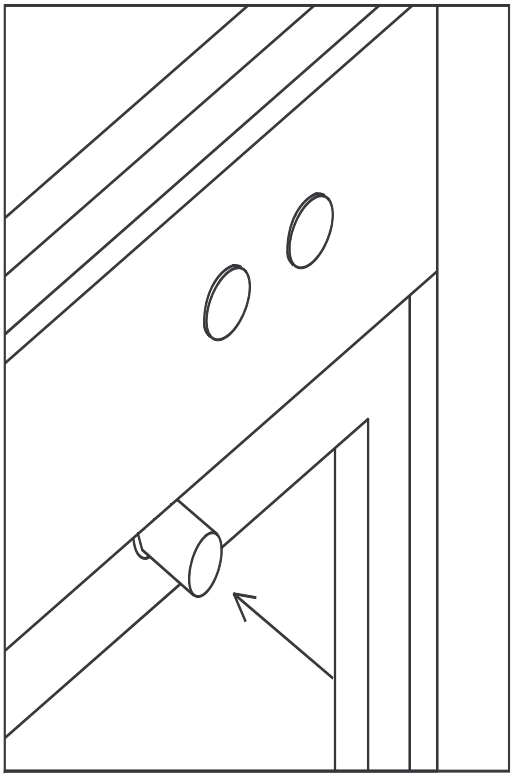


- Set the two switches on the lighting strip to 0.
- The switch nearer the end of the switch controls the air conditioning unit.



- The other switch controls the lighting.
- Connect the power supply cable (single phase 220 V + earth) to a plug.

LIGHTING



Position 0: The lighting operates automatically

. Check that the lighting operates.
. The light should turn off automatically when the door is closed.
. The yellow indicator on the outside shows whether the light is on inside the wine cellar.

Position 1: Lighting override

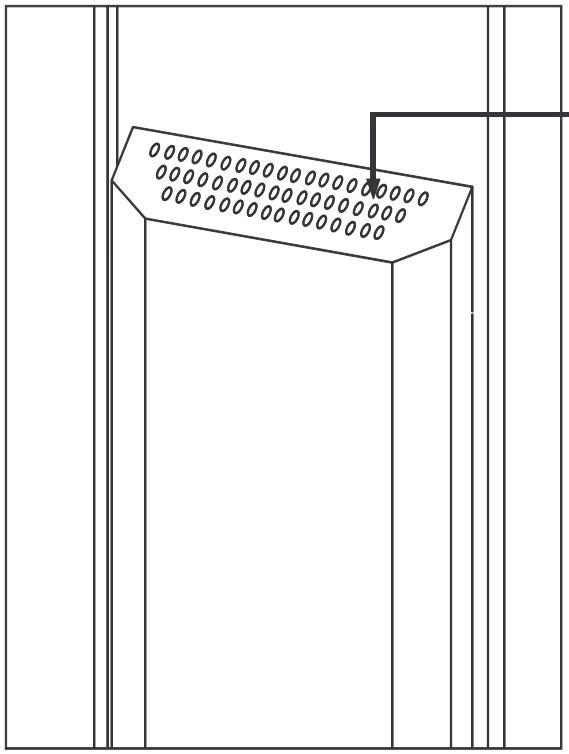
. The lighting can also be turned on manually if you wish to stay in the wine cellar with the door closed, for example to stack bottles. In this case, set the light switch to 1..

REMEMBER to set the switch back to 0 for normal use: light can prevent wine ageing correctly.

IN CASE OF PROBLEMS: (see opposite)

. check that the light switch is set to 0,
. check that the white switch pusher operated by the door is working.

AIR CONDITIONING UNIT



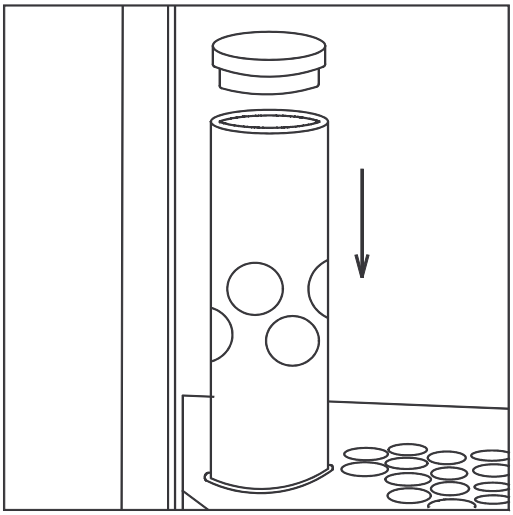
TEMPERATURE
Turn on the air conditioning (switch at end of strip).
The green light should come on.
The internal fan operates continuously.
The external fan operates only when the unit is cooling.
The unit thermostat is preset to maintain a constant temperature of about 12 to 13°C inside the wine cellar.
This temperature can be adjusted between 8°C and 15°C by turning the control knob.
If the temperature outside the cellar drops too low, (in winter, for example) and there is a risk that the temperature inside the cellar will fall, a heater within the air conditioning unit will automatically take over from the refrigeration system in order to maintain the ideal temperature.

Minimum setting
(Do not force it past this position)

Factory presetting
(Recommended temperature set between 12 and 13° C)

Maximum setting
(Do not force it past this position)

RELATIVE HUMIDITY
If the humidity is too low the corks will dry out (leakage), if the humidity is too high the corks and labels may go mouldy but the wine will not be affected. The air conditioning unit has been specially designed to maintain a optimum humidity.



FILTRING NEW AIR FROM OUTSIDE

A small amount of new air from the outside is continuously drawn into the cellar to oxygenate the inside.
This air passes over an active carbon filter.
This filter must be changed regularly if the cellar is located in place with unpleasant odours.

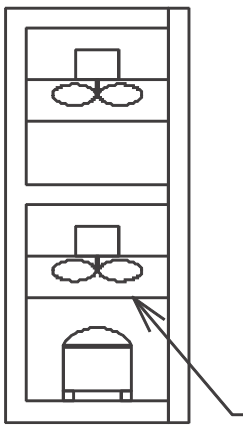
GENERAL PRECAUTIONS

Resetting the temperature:

. Adjust the temperature gradually in very small increments so that the air conditioning unit does not operate for an excessively long time (to avoid icing up).

To ensure that the air conditioning unit operates efficiently:

- Never obstruct the ventilation grills in the door or over the unit.
- The cellar should be placed in a well-ventilated area where the temperature does not exceed 35°C, to ensure that the refrigeration unit will be effective.
- Dust sucked in by the air conditioning unit may reduce the efficiency of operation. The air conditioning unit should be checked regularly to ensure that the condenser is clean. The air conditioning unit should be lifted off the door (page 11) and the condenser should be cleaned using a vacuum cleaner. This maintenance is not covered by the guarantee.



MAINTENANCE

- **Temperature too low**

1 **The thermometer is not showing the correct reading:** Check by using another thermometer.

2 **Thermostat set too low**: Raise the temperature gradually to avoid subjecting your wine to sudden changes in temperature. .

- **Temperature too high**

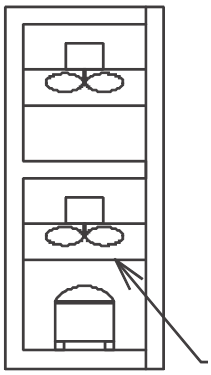
1 **The thermometer is not showing the correct reading**: Check by using another thermometer.

2 **Thermostat set too high**: Lower the temperature gradually to avoid subjecting your wine to sudden changes in temperature.

3 **Door not properly closed**: Check that the door closes and locks correctly.

4 **Ventilation in the room where the wine cellar is installed is inadequate** (this problem usually arises when the outside temperature is high): If possible, open the door or windows. Install a ventilation system in the room (ventilation grill, extractor fan, etc)

5 **Thermostat setting decreased too suddenly**: causes the air conditioning unit to ice up.



6. Air conditioning unit iced up: Turn the air conditioning unit off for 48 hours and turn on again, ensuring that the thermostat is set between the minimum and maximum temperatures. If the problem persists, disconnect the mains supply, remove the air conditioning unit from the door (page 11) and clean the condenser using a vacuum cleaner. This maintenance is not covered by the guarantee

(Receipt to join at the order)

I, the undersigned, Mr

_____

Residing at

_____

_____

_____

Declare that I have received the installation and recommandations guide for the VINOSAFE air-conditioning door VSE-PC1 / VSE-PC2.

Signed at _____ on _____

CUSTOMER'S SIGNATURE